

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent to : Tai A. Ly et al.
Patent No. : 5,764,951
Issued : June 9, 1998
Title : METHODS FOR AUTOMATICALLY PIPELINING LOOPS

Box REISSUE
Assistant Commissioner for Patents
Washington, D.C. 20231

DECLARATION OF INVENTORS IN APPLICATION
FOR BROADENING REISSUE OF PATENT

Pursuant to 37 CFR 1.63 and 1.175

This declaration is made in application for broadening reissue of the above-identified patent.

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am an original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled

METHODS FOR AUTOMATICALLY PIPELINING LOOPS

the specification of which: *(check one)*

☐ is attached hereto; or

☐ was filed on _____ as U.S. Reissue Application Serial No. ____ / ____ and is/was amended on _____ *(if applicable)*;

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I believe the original patent to be wholly or partly inoperative or invalid, for the reasons described below:

- ☐ by reason of a defective specification or drawing.
☐ by reason of the patentee claiming more or less than he had the right to claim in the patent.
☐ by reason of other errors.

At least one error upon which this application for reissue is based is described as follows:

All errors corrected in this reissue application arose without any deceptive intention on the part of the applicant.

I hereby identify below, and where indicated claim foreign priority benefits under Title 35, United States Code §§ 119(a)-(d) or §§ 365(a)-(b) of any foreign application(s) for patent or inventor's certificate or of any PCT international application(s) designating at least one country other than the United States of America, filed within 12 months (6 months for design) prior to this application, and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) on which priority is claimed (*if any*):

Foreign/PCT Application Number	Country	Filing Date (MM/DD/YYYY)	Priority Claimed	
			<input type="checkbox"/> Yes	<input type="checkbox"/> No
			<input type="checkbox"/> Yes	<input type="checkbox"/> No
			<input type="checkbox"/> Yes	<input type="checkbox"/> No

I hereby claim the benefit under Title 35, United States Code, §119(e) of any United States provisional application(s) listed below (if any):

Provisional Application No.	Filing Date

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s), or § 365(c) of any PCT International Application designating the United States of America listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided

by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

U.S./PCT Parent Application No.	Filing Date	Status (<i>Patented, Pending, or Abandoned</i>)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of First Joint Inventor	Ty A. Ly		
Inventor's Signature		Date	
Residence		Citizenship	
Post Office Address			

Full Name of Second Joint Inventor	David W. Knapp		
Inventor's Signature		Date	
Residence		Citizenship	
Post Office Address			

Full Name of Third Joint Inventor	Ronald A. Miller		
Inventor's Signature		Date	
Residence		Citizenship	
Post Office Address			

Full Name of Fourth Joint Inventor	Donald B. Macmillen		
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Inventor's Signature		Date	
Residence		Citizenship	
Post Office Address			

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent to : Tai A. Ly et al.
Patent No. : 5,764,951
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COMBINED CONSENT OF ASSIGNEE AND FILING PURSUANT TO 37 CFR 3.73(b)
WITH POWER OF ATTORNEY

In Application for Broadening Reissue Pursuant to 37 CFR 1.171 et seq.

This is part of the application filed herewith for broadening reissue of the above-identified United States Patent. The undersigned Applicant is assignee of the entire interest in the original patent and consents to the filing of this application for broadening reissue.

Applicant Synopsys, Inc., is a corporation organized under the laws of the state of Delaware and having offices at 700 East Middlefield Road, Mountain View, California, 94043-4033. Applicant is owner of the entire interest in the patent which is the subject of the proceedings herein pursuant to that assignment recorded at reel 7584, frame 0017 of the records of the United States Patent and Trademark Office on July 17, 1995. A copy of that assignment is attached hereto.

Applicant hereby appoints the following attorney(s) or agent(s), of the law firm Brown Raysman Millstein Felder & Steiner LLP, 120 West Forty-Fifth Street, New York, New York, 10036, its attorneys with full power of substitution and revocation to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

Jonathan T. Kaplan, Reg. No. 38,935
Seth H. Ostrow, Reg. No. 37,410
Michael K. Kinney, Reg. No. 42,740
Katrine A. Levin, Reg. No. 41,941
Michael Malish, Reg. No. 41,968

Frank J. DeRosa, Reg. No. 26,543
Louis J. Greco, Reg. No. 41,799
Matthew J. Marquardt, Reg. No. 40,997
Frederick Yu, Reg. No. 45,251

Please direct all correspondence to:

Brown Raysman Millstein Felder & Steiner LLP
120 West 45th Street
New York, New York 10036

Direct all telephone calls to: (212) 944-1515

The undersigned individual declares that he is authorized to execute this document on behalf of Applicant.

Respectfully submitted,
Applicant Synopsys, Inc.
by

Date: _____, 2000

Bryn Ekroot
Associate General Counsel



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

DECEMBER 19, 1995

PTAS

3475.00003

(A 1994.049)



100053819A

GRAHAM & JAMES
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PALO ALTO, CA 94306

**UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT**

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, NORTH TOWER BUILDING, SUITE 10C35, WASHINGTON, D.C. 20231.

RECORDATION DATE: 07/17/1995

REEL/FRAME: 7584/0017
NUMBER OF PAGES: 2

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

LY, TAI A.

DOC DATE: 06/19/1995

ASSIGNOR:

KNAPP, DAVID W.

DOC DATE: 06/16/1995

ASSIGNOR:

MACMILLEN, DONALD B.

DOC DATE: 06/19/1995

ASSIGNOR:

MILLER, RONALD A.

DOC DATE: 06/19/1995

ASSIGNEE:

SYNOSPSY, INC.
700 EAST MIDDLEFIELD ROAD
MOUNTAIN VIEW, CALIFORNIA
94043-4033

SERIAL NUMBER: 08440554

PATENT NUMBER:

FILING DATE: 05/12/1995

ISSUE DATE:

DATES ENTERED:

DEC 27 1995

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent to : Tai A. Ly et al.
Patent No. : 5,764,951
Issued : June 9, 1998
Title : METHODS FOR AUTOMATICALLY PIPELINING LOOPS

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Washington, D.C. 20231

APPLICATION BY ASSIGNEE FOR BROADENING REISSUE OF PATENT
And Offer to Surrender Patent Pursuant to 37 CFR 1.178

Application is hereby made for broadening reissue of United States Letters Patent No. 5,764,951, entitled Methods for Automatically Pipelining Loops, issued June 9, 1998, to Tai A. Ly et al., the specification of which is attached hereto, with amendments clearly indicated therein in accordance with 37 CFR 1.173. Applicant by making this application seeks to enlarge the scope of the claims of the original patent.

Applicant requests that the drawings upon which the original patent was issued be used in examination of this reissue application. Temporary drawings consisting of photocopies of drawings in the issued patent are attached hereto in accordance with 37 CFR 1.174.

Applicant hereby offers to surrender the original letters patent herein.

Attached hereto is a Combined Consent of Assignee and Filing Pursuant to 37 CFR 3.73(b) (unexecuted) establishing the consent to and right of Assignee to take action in this reissue.

Respectfully submitted,

Jonathan T. Kaplan

Date: June 8, 2000

Jonathan T. Kaplan
Reg. No. 38,935
BROWN RAYSMAN MILLSTEIN
FELDER & STEINER LLP
120 West Forty-Fifth Street
New York, New York 10036
Tele: (212) 944-1515
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JERYL MCDOWELL, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

[illegible]

ASSIGNMENT

(1) Tal A. Ly (4) Ronald A. Miller
 (2) David W. Knapp (5) _____
 (3) Donald B. MacMillen (6) _____

(1-6) Insert Name(s)
of Inventor(s)

In consideration of the sum of one dollar (\$1.00) and other good and valuable considerations paid to each of the undersigned, the undersigned agree(s) to assign, and hereby does assign, transfer and set over to

(7) Insert name of
Assignee

(7) Synopsys, Inc.

(8) Insert state of
incorporation of
Assignee

(8) Delaware Corporation

(9) Insert address of
Assignee

(9) of 700 East Middlefield Road, Mountain View, CA 94043-4033
(hereinafter designated as the Assignee) the entire worldwide right, title and interest in the invention known as

(10) Insert Identifi-
cation of invention,
such as Title, Case,
Number or Foreign
Application Number

(10) "Methods for Automatically Pipelining Loops"
S/N 08/440,554; filed 5/12/95 (Case No. Atty. Docket 34175.00003
for which the undersigned has (have) executed an application for patent
in the United States of America

(11) Insert Date of
Signing of Application

(11) on July 16 and July 19, 1995

1) The undersigned agree(s) to execute all papers necessary in connection with the application and any continuing or divisional applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

2) The undersigned agree(s) to execute all papers necessary in connection with any interference which may be declared concerning this application or continuation or division thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference.

3) The undersigned agree(s) to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.

4) The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent to the Assignee.

5) The undersigned hereby authorize(s) and request(s) the Commissioner of Patents to issue any and all Letters Patents of the United States resulting from said application or any division or divisions or continuing applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) full right to convey the entire interest herein assigned, and that he has (they have) not executed and will not execute, any agreement in conflict herewith.

6) *The undersigned hereby grant(s)*

David L. Fehrman, Reg. No. 28,600; David L. Henty, Reg. No. 31,323; William J. Robinson, Reg. No. 29,430; Stuart L. Merkadeau, Reg. No. 33,262; Michael D. Scott, Reg. No. 27, 384; David B. Abel Reg. No. 32,394; Hisako Muramatsu, Reg. No. 34,955; Joseph T. Fitzgerald, Reg. No. 33,881; Brian M. Berliner, Reg. No. 34,549; David J. Meyer, Reg. No. 33,425; Mitchell P. Brook, Reg. No. 32,967; and Lawrence W. Granatelli, Reg. No. 32,228; Laura Majerus, Reg. No. 33,417; Bryn Ekroot, 38,129

the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

Date: June 19, 1995 Name of Inventor [Signature] (SEAL)

Date: June 16, 1995 Name of Inventor [Signature] (SEAL)

Date: 19 June 1995 Name of Inventor Donald B. MacMillen (SEAL)

Date: June 19, 1995 Name of Inventor Ron Miller (SEAL)

Date: _____ Name of Inventor _____ (SEAL)



PATENT AND

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Form PTO-1595
1-31-92

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U.S. DEPARTMENT OF COMMERCE
Patent and Trademark OfficeRECORDATION FORM COVER SHEET
PATENTS ONLY

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Tai A. Ly
David W. Knapp
Donald B. MacMillen
Ronald A. MillerMRd
7-17-95

2. Name and address of receiving party(ies):

Name: Synopsys, Inc.

Internal Address: _____

Additional name(s) of conveying party(ies) attached? ☐ yes ☒ no

3. Name of Conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other _____Street Address: 700 East Middlefield RoadCity: Mountain View State: CA ZIP: 94043-4033Execution Date: June 16, 1995 and June 19, 1995Additional name(s) & address(es) attached? ☐ yes ☒ no

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: _____

A. Patent Application No.(s) 08/440,554

B. Patent No.(s) _____

Additional numbers attached? ☐ yes ☒ no

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Laura A. Majerus, Esq.Internal Address: Graham & JamesStreet Address: 5 Palo Alto SquareSuite 10003000 El Camino RealCity: Palo Alto State: CA ZIP: 943066. Total number of applications and patents involved: 17. Total fee (37 CFR 3.41): \$ 40.00☒ Enclosed☐ Authorized to be charged to deposit account
entire fee

8. Deposit account number: _____

(Attach duplicate copy of this page if paying by deposit account)

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9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Page No. 33, 417
Laura A. Majerus
Name of Person SigningLaura Majerus
Signature07/12/95
DateTotal number of pages comprising cover sheet: 1

OMB No. 0651-0011 (exp. 4/94)

Mail documents to be recorded with required cover sheet information to:

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